

-20-

## CLAIMS

1. A method for determining the single seed loading distribution (Gaussian and non-Gaussian) of one or more pesticides on pesticidally treated seeds comprising the steps of:

- 5 1) Selecting a subset of seeds sufficient to determine said distribution;
- 2) Maintaining a seed from said subset in contact with an extracting fluid to substantially selectively extract one or more pesticides from said seed to yield a test sample, and optionally using one or more other extracting fluids to substantially selectively extract one or more other pesticides from the seed to yield one or more other test samples, and
- 10 optionally then combine the test samples to yield a single test sample;
- 3) Filtering the test sample containing the pesticide to substantially remove undesired substances extracted from the seed;
- 4) Separating the one or more pesticides from other substances in the filtered test sample by chromatography;
- 15 5) passing the one or more separated pesticides into a detector;
- 6) Detecting the signal generated by the pesticide at the detector;
- 7) Relating the amount of signal detected to a quantity of pesticide;
- 8) Repeating Steps 2-7 sequentially for each seed in said subset;
- 9) Determining the single seed loading distribution (both Gaussian and non-Gaussian)
- 20 for the pesticidally treated seeds based on the pesticide quantity determined for each seed in the subset; and
- 10) Optionally, repeating Steps 4-9 to determine quantity and seed loading distribution of another pesticide in the test sample.

25 2. The method according to claim 1 wherein an autodiluter is used in step 2 to add the extracting fluid to the seed.

3. The method according to either claim 1 or claim 2 wherein step 3 is carried out in a

30 autosampler vial with a built-in filter.

4. The method according to any one of claims 1 to 3 wherein a HPLC is used in step 4 and a UV detector having a dual detector of 265nm and 230nm wavelength is used in steps 5 and 6.

**-21-**

5. The method according to claim 4 wherein a HPLC having a column with at most 150mm x 4.6 mm diameter and at most 5 micron packing is used in step 4.